MARKET REACTION TO INCLUSION AND EXCLUSION OF REGULATED SHORT SELLING (RSS) STOCK IN REGULATED SHORT SELLING LIST IN BURSA MALAYSIA : EVIDENCE FROM MALAYSIA 2010 – 2012

by

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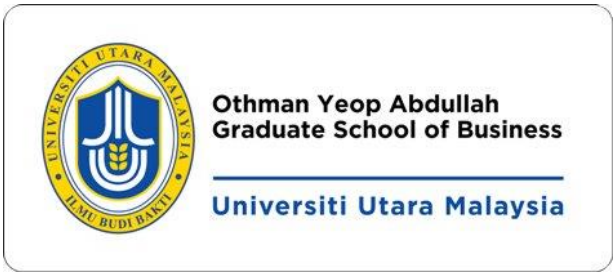

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ABSTRAK

Tujuan kajian ini adalah untuk menyelidik reaksi harga pasaran saham terhadap saham yang dimasukkan ke dalam senarai jualan singkat yang dikawal selia dan sahamyang dikeluarkan daripada senarai jualan singkat yang dikawal selia di pasaran ekuiti Malaysia atau diketahui sebagai Bursa Malaysia dalam tempoh tahun 2010 hingga 2012. Sebanyak 71 saham yang dimasukkan ke dalam senarai jualan singkat yang dikawal selia and 76 saham yang dikeluarkan daripada senarai jualan singkat yang dikawal selia telah dipilih sebagai sampel untuk pengajian ini. Abnormal return (AR), Average Abnormal Return (AAR) dan Cumulative Abnormal Return (CAR) dengan cara *t*-statistic telah digunakan untuk mengenalpasti tujuan kajian ini. Hasil kajian ini bertentangan dengan jangkaan bahawa harga saham tiada perubahan sebelum dimasukkan ke dalam senarai jualan singkat yang dikawal selia dan harga pasaran akan naik berturutan setelah dimasukkan ke dalam senarai juala singkat yang dikawal selia di Bursa Malaysia. Keputusan kajian yang bertentangan dengan jangkaan telah disiasat melalui jurnal daripada ulama dahulu dan didapati keputusan demikian berkemungkinan dipengaruhi oleh maklumat peribadi yang telah diberitahu kepada pelabur sebelum pengumuman rasmi atas kemasukkan saham ke senarai jualan singkat yang dikawal selia. Jangakaan untuk reaksi harga pasaran saham sebelum and setelah dikeluarkan daripada senarai jualan singkat yang dikawal selia disokong oleh keputusan kajian ini dimana tiada perubahan atas harga saham sebelum saham dikeluarkan daripada senarai jualan singkat yang dikawal selia and harga saham akan turun selepas dikeluarkan daripada senarainya.

Katakunci: pelaburan, jualan singkat yang dikawal selia, kajian acara, maklumat peribadi, Bursa Malaysia

ABSTRACT

The objective of this study is to examine the market reaction towards the listing and delisting of stocks from regulated short selling (RSS) list in Bursa Malaysia (BM) from the research period of 2010 to 2012. A total of 71 stocks have been chosen to list in RSS list in BM and a total of 76 stocks were being removed from RSS list in BM during the research period. Abnormal return (AR), Average Abnormal Return (AAR) and Cumulative Abnormal Return (CAR) were used to examine the market reaction with *t*-statistic was taken to test the significance of the results. The finding and analysis do not support our prediction of stock prices were stagnant prior to list in RSS list and stock prices would move in an upward trend after it is listed in RSS list in BM. Few journal in regards to the findings that do not support the prediction were studied and were found that opposite outcome from our prediction could be due to private information of stocks to be listed in RSS list prior to the official announcement could possibly leaks to investor that induce speculation on stock investment. Prediction on price movement on stocks to be delisted from RSS list before and after were supported where stock prices were stagnant prior to removal from RSS list and stock price move downward after it is being removed from RSS list.

Keywords: investment, regulated short selling, event study, private information, Bursa Malaysia

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LIST OF ABBREVIATION

AR	Abnormal Returns
AAR	Average Abnormal Return
Amex	American Stock Exchange
BM	Bursa Malaysia
CAR	Cumulative Abnormal Returns
HKEx	Hong Kong Stock Exchange
KLCI	Kuala Lumpur Composite Index
NASDAQ	National Association of Securities Dealers Automated Quotations
NYSE	New York Stock Exchange
NYSE ACRA	Archipelago Exchange
PIPE	Private Investment in Public Equity
PLCs	Public Listed Companies
RSS	Regulated Short Selling
SEC	Securities and Exchange Commission
US	United State
USA	United State of America
UUM	Universiti Utara Malaysia

CHAPTER 1

INTRODUCTION

1.0 Chapter Overview

Investment defines that asset of companies into which fund can be placed with the expectation that it will generate positive income and / or preserve or increase its value. (Gitman, Joehnk, & Smart, 2011). According to Gitman et al. (2011), investment is an activity that could be conducted by investors in the economy for their mission or vision to increase capital or wealth. Formal definition of investment by Brown & Reilly (2002) refer to future payment to investor, for a period of time that will compensate the investor for the i) the time of the fund invested, ii) inflation rate during the investment period and iii) The unforeseen investment value changes in the future payment.

Typically, there are two types of investors, i. individual investor and ii. institutional investor (Gitman et al., 2011). Individual investor refers to individual or household who invests for personal financial goal. Institutional investor is comprised of government, corporate, bank, pension fund, fund manager, insurance company & etc. whom are paid to manage money of people for capital gain or for the purpose to increase the shareholders' wealth (Gitman et al., 2011).

According to Gitman et al., (2011), major types of investments available are short term investments, common stocks, fixed income securities, mutual funds, derivatives and miscellaneous which include various types of other investment vehicles that are widely used by investors.

In this study, stocks listed on Bursa Malaysia (BM) are chosen to be the main focus of the investment strategy. As per audited report of BM dated 31st December 2012, there is a total of 921 Public Listed Companies (PLCs) listed in BM. This study has further narrowed down to examine on "Regulated Short Selling (RSS)", to find out what are the effect of changes in stock prices when it is announced to be listed or delisted from RSS list in BM.

1.1 Background of the Study

Short selling is an investment technique that allows an investor to sell stocks or other securities or commodities which one does not own at that point of time, in the hope of buying at a lower price before the delivery time (Oxford Dictionary). In Malaysia, short selling trading was prohibited with effective from 5 September 1997 for the purpose to stop speculation on stock selling during 1997 Asian Financial Crisis. (Star 2006; Oxford Business Group 2006; Bernama 2006). After the crisis, few measurements of capital control had been in place in Malaysia. Reintroduction of short selling is a move to reinvigorate trading and interest in a market that was once one of the most popular investment technic that actively practice by investors in Asia. (Oxford Business Group 2006).

BM then reintroduced RSS again in the year 2007 with effect from 3rd January 2007 with 40-70 selected stocks listed on Bursa Malaysia at the initial stage and gradually increased to 100 stocks (Star 2006; Oxford Business Group 2006; Bernama 2006). Announcement of reintroduction of RSS, implementation of short selling is one of the features of developed stock market which would contribute to attract more foreign

investors, to increase the stock market liquidity and to enhance the vibrancy of Malaysia Market. (Bernama 2006; Oxford Business Group 2006).

Over the past decades, empirical researches conducted by scholars using extensive theories to find out about the factors that were related to short selling. Short selling has existed in major financial markets for decades, its effect on market efficiency, especially on pricing efficiency, remains of interest to financial researchers.

Studies conducted by scholars on price efficiency on different occasions that affect stock prices could relate to our study to find out whether stock prices would be affected by the RSS listing announcement. Early papers, such as Miller (1977) had theorized that security prices tend to overprice and move to an upward trend which was a reflection of the most optimistic opinion on short-sales constraints which were preferred by pessimist investors. This argument is concluded based on two conditions:

(i) security short sales are either prohibited or costly and

(ii) investors have heterogeneous belief or information about the security's value.

According to Miller (1977), share prices are bounded by the limit set by the buying and short-selling of informed investors. When short sales are not available, pessimistic investors were usually stayed out of the market instead of investing, resulting aggressive investor to continue investing at a price that is above their average market price. This had caused prices were not reflecting the negative

information basing on the argument on market efficiency theory that "a market in which price always 'fully reflect' available information." (Fama, 1970).

Miller's (1977) studies in relation to Capital Asset Pricing Model framework was challenged by Jarrow (1980) and Figlewski (1981). Jarrow (1980) studied that substitution among stocks had led to a more complicated short sales prohibition. Price of share would be fluctuated when two equivalent markets differing only with respect to short-sales restriction was taken for comparison.

Figlewski's (1981) study is consistent with Miller's (1977) intuition. By adopting a standard one-period model, excess demand appeared when adverse information is relayed to investors that subsequently resulted share price increases.

Diamond and Verrecchia (1987) set up a model testing the speed of stock price adjustment of short-sale constraints to private information. Their study concluded that short-sale constraints tend to remove some informative transactions, it does not prejudice share price increases. Keeping investors out of short-sale transaction will decrease the speed of stock price adjustment to private information, particularly to adverse information where share prices tend to move downward gradually.

Bai, Chang, & Wang (2003) examined on how short-sales constraint influence asset price and market efficiency basing on investment that is transacted to share risk and to speculate on private information. Their study determined that types of transaction were limited by short-sales constraints and it decreases the efficiency of news or information distribution on the market. Bai et al (2003) concluded that limiting short-

sales basing on private information would increase the uncertainty of asset price as opined by less informed investors that ultimately decrease their interest over the asset. In such an event, short-sales constraint affects asset prices moving downward and price fluctuation increases.

Different methods for reaction of share prices towards informational where used by scholars which could probably apply to our study. The reaction of share prices towards informational efficiency of short-sales constraints with direct measurement method is used by Reed (2007). Reed (2007) agreed with Diamond and Verrecchia (1987) on their prediction that the share price of short-sales constraints adjust downward gradually in the event short-sales are constrained. Senchack and Starks (1993) analyzed that short-term negative abnormal returns of individual firm using cross-sectional analysis are (1) more negative if a higher degree of unexpected short interest and (2) less negative if the firm has tradable option.

According to BM's chief executive officer Yusli Mohamed Yusoff during the announcement of reintroduction of RSS, implementation of short selling is one of the features of developed stock market which would contribute to attract more foreign investors, to increase the stock market liquidity and to enhance the vibrancy of Malaysia Market. (Bernama 2006; Oxford Business Group 2006). Therefore, it is believed that implementing of RSS could increase the transaction in BM.

There is no study on RSS found in Malaysia market, hence, this study is focus on regulated short selling in Malaysia Market and concentrate on stock price fluctuation on every announcement of a stock being listed or delisted from BM. There is a total

of 100 stocks with criteria met are allowed for RSS trading. The 100 stocks changes as and when as announced by BM. This study has catered data related to this research and concluded that stock prices do change when it is announced to be listed or delisted from the regulated short selling list.

1.2 Problem Statement

RSS implemented by BM is to allow short selling activities with the opinion that it would contribute to attract more foreign investors, to increase the stock market liquidity and to enhance the vibrancy of Malaysia market. (Bernama 2006; Oxford Business Group 2006). Basing on opinion of possibility in boosting the Malaysia market, prices of stock are believed would be affected when it is being included or excluded from the regulated short selling list.

Base in literature search conducted over several reputable sites such as Social Science Research Network, Emerald Management Plus, Cambridge Journal Online and EBSCO eBook, there is no evidence or research being conducted in stock price changes when it is being listed or delisted from RSS list in Malaysia market. Therefore, there is a need to examine the reaction of stock price when it was being added or removed from RSS list in BM.

The objective of this study is to analyze stock price changes when it is being added or removed from RSS list in BM. This study could help both individual and institutional investor to have some insight on their future investment arrangement that probably could assist them to achieve their financial goal and planning. It helps regulators for

regulation setting and implementation and it could be used by management of Bursa Malaysia to examine in depth on implementation of RSS.

1.3 Research Questions

This study is to examine how is the reaction of stock price changes to announcement of stock being added or removed from RSS. The research questions of this study are as follows:-

1. Do stock prices increases or decreases prior to and after it was announced to be listed or added into RSS list in BM?
2. Do stock prices increases or decreases prior to, on and after it were announced to be delisted or removed from RSS list in BM?

1.4 Research Objectives

The main objective of this study is to investigate the stock price fluctuation towards announcement by BM on stock to be added or removed from the regulated short selling list in BM basing on the research period from year 2010 to the year 2012.

The specific research objectives are as follows:-

1. To identify stock price performance prior to and after the particular stock is announced to be listed or added into RSS list in BM.
2. To identify stock price performance prior to and after the particular stock is announced to be delisted or removed from RSS list in BM.

1.5 Significance of the Study

Due to in-availability of research findings in Malaysia market in relation to regulated short sales prices changes when it is announced to be listed and delisted from RSS list. This study attempts to investigate the stock price changes in Malaysia with the significance of the study as follows:-

1. To provide some indication and idea for investors to decide when would be the right time for their stock investments that possibility could maximize their wealth.
2. It could be used for a government policymaker or regulators to observe RSS investment activities in Malaysia market and implement negative and positive relevant regulations.
3. The researcher could take this study as additional knowledge for studies. It could be taken for their research and for academic purposes that could provide them the information in relation to Malaysia regulated short selling.
4. Ultimately, BM benefits the most from this studies as they could basing on this study, looking for opportunities to encourage investor to invest more actively in Bursa, either in normal stock investment, RSS and other investment that they deem fit.

1.6 Scope and Limitations of the Study

This study concentrates on stock price changes when prior to and after it is listed or removed from RSS list in BM. Stock listed in the RSS is selected by BM which constitutes 100 stocks out of 921 total stocks listed in BM (Bursa Malaysia Audited Report 2012). The research period is from the year 2010 to the year 2012, studied on

stock price changes that were selected to be listed or removed from RSS list on half yearly basis by BM.

The limitations of this study are as follows:-

1) Limited past literature research or studies over the topic of short selling in the academic field and no research or studies found in Malaysia.
2) In-availability of data from online – this study is based mainly on secondary data. Full data are not available online and need to be collected from Bursa Malaysia and database in library of public universities.
3) Daily stock prices of some stocks added to or removed from RSS in BM does not exist which is due to the company had been totally delisted from BM, privatized or merged with another company listed in BM.
4) The result is mainly based on historical transactions transacted in BM on stock that is listed or being removed from the approved list by BM

1.7 Organization of the Thesis

This research is organized into five chapters. Chapter one is the introduction of this dissertation which provides a summary of the background about the history of RSS in BM. This chapter introduces the problem statement on this study, research question, research objective, the significance of the study and scope limitations of the study.

Chapter two is a literature review that relates to this study. The overview of regulated short selling in Bursa Malaysia, short selling progress and past literature studies in relation to short selling and their findings were stated in this chapter.

Chapter three describes the research methodology used in this research, hypothesis development, data collection procedures and techniques of data analysis.

Chapter four discussed about the end result of the research based on data and findings. The completed results and analyses in the form of figures, tables or text and key information are highlighted.

Chapter 5 states the conclusions drawn from this research and recommendations of continuation of regulated short selling listed in Bursa Malaysia. Future research and suggestion of possible directions are recommended in this research.

CHAPTER 2

LITERATURE REVIEW

2.0 Chapter Overview

This chapter will review existing empirical studies and to discuss some theories related to this study as well as findings and price changes effect related to short selling listing. This chapter starts with definitions of regulated short selling (RSS), follows by progress of short selling activities, and previous study on short selling. This chapter ends with a summary.

2.1 Definitions of Regulated Short Selling (RSS)

As per Bursa Malaysia Rules, Securities: Rules of Bursa Malaysia Securities, Chapter 7 : Trading at rule no. 704 that,

> "it defines that regulated short selling means the selling of approved securities where the seller does not, at the time of the execution of the sale, have an exercisable and unconditional right to vest such securities in the purchaser but has, prior to the execution of the sale, borrowed the approved securities or obtained confirmation from an Authorised SBL Participant that the Authorised SBL Participant has the approved securities available to lend, pursuant to a SBL Agreement as will enable delivery of the same to be made to the purchaser under the said sale, in accordance with the Rules relating to delivery and settlement, in Chapter 8, and "regulated short sale" means the sale relating to the same." (25)

Short selling is an investment technique that allows investor to sell stock or other security or commodities which one does not own at that point of time, in the hope of buying at a lower price before the delivery time (Oxford Dictionary). According to Oxford Business Group (2006), short selling is a popular investment technique. In short selling transaction, investors sell the stock at a higher price when they do not own the stock of the particular counter and thereafter, purchase the stock back at a

lower price. This sell and purchase transaction are working based on stock lending from the eligible counter in securities exchange. To engage in short selling, several requirements require including credit assessment by a stock broking company for investor who wish to engage in short selling activities due to the nature of the technique that involved stock borrowing. Thus, in general, short sellers are more sophisticated than the average investor.

2.2 Progress of Short Selling Activities

Short selling activities have been around in the market for decades. According to Staley (1997), short selling activities in 1980s were practiced by smart investors who managed to make profit from their investment in good and bad years basing on their own analytical method concentrate on the quality of earnings, quality of assets and quality of management, invest in identified a business that was run by incompetent managers with stock prices that were being inflated. They believed that stock prices would subsequently reflect the prices that were consistent with the value.

Short sells activities were not popular in early 1990s loss out to other investment tools, ie, mutual fund, short squeeze as an accepted investment philosophy and questionable financial statement of listed companies. In mid of 1990s, short selling activities with the concept of shorting for profit resumed active and gain back respect by investors again until now (Staley 1997).

In Malaysia, short selling trading was prohibited with effective from 5 September 1997 to stop speculation on stock selling during 1997 Asian Financial Crisis. (Star 2006; Oxford Business Group 2006; Bernama 2006). After the crisis, few

measurements of capital control had been in place by Malaysia, reintroduction of short selling is a move to reinvigorate trading and interest in a market that was once one of the most popular investment technic that actively practice by investors in Asia. (Oxford Business Group 2006).

After 1 decade, BM then reintroduced RSS again in the year 2007 with effect from 3rd January 2007 with 40-70 selected stocks listed on Bursa Malaysia at the initial stage and gradually increased to 100 stocks (Star 2006; Oxford Business Group 2006; Bernama 2006) believed that reintroduction of RSS would attract more foreign investors, to increase the stock market liquidity and enhance the vibrancy of Malaysia Market (Bernama 2006; Oxford Business Group 2006).

2.3 Previous studies on Short Selling

Several studies were conducted by scholars over the past decades. Chang and Yu (2004) studied on short-sales restrictions in the Hong Kong Stock market and revealed that short-sales constraints tend to cause share prices being overvalued. Chang and Yu (2004) retrieved existing record of the list of Designated Securities Eligible for Short Selling from the Hong King Stock Exchange. The study period from January 1992 to July 2003 with a total of 21 revised lists were taken for their research with last revision was dated 27th January 2003. The research result revealed that there is a total of cumulative 448 stocks appeared in a Designated Security Eligible list with a number of 519 stocks were included into the list and a total of 355 stocks were removed from the list within the research period.

The study examined the role of short-sales constraints in price discovery and their role in stabilizing or destabilizing the market. The finding revealed that stock prices move in upward biased when short sales are restricted. Other evidence was found for off-the-list events where the re-imposition of short-sales restrictions on certain stocks results in significantly positive abnormal returns.

The overvaluation effect is greater for individual stocks when investor's estimation spread. Chang and Yu (2004) suggest that removing short-sales restriction contributes to the improvement of the efficiency of price discovery. This suggestion is consistent with Miller (1977)'s intuition where private information in the scenario of un-availability of short sales would result in stock prices to fluctuate above their average.

Several studies conducted by scholars are related to private information that would affect stock prices and market efficiency which could be related to this study by examines whether stock prices would be affected by the RSS listing announcement.

Reed (2007) studied on the reaction of share prices towards informational efficiency of short-sales constraints with the direct measure method used. Study period conducted by Reed (2007) was from 1st November 1998 to 20th October 1999 examined on prices and quantities for lender's U.S. equity loans. The data show that the median loan duration is 3 days, and the mode of the distribution is 1 day. A total observation of 287,838 representing new loans, 1,579,763 observations representing changes to existing loans, and 1,617,773 observations representing loans that were

extended but otherwise unchanged. A total of 684,007 unique loan rate observations was averaged over multiple loans in a given stock each day.

The result of their study revealed that short sale constraints impede the incorporation of private information into stock price, stock returns would increase in absolute figures in the event private information is made public. Reed (2007) agreed with Diamond and Verrecchia (1987) on their prediction that the share price of short-sales constraints adjust downward gradually in the event short-sales are constrained. Studies of Reed (2007), Diamond and Verrecchia (1987) on the share price adjustment downward gradually in the event short-sales are constrained could relate to this study of RSS listing by examining whether stock prices would adjust downward according to their intuition.

Beside private information, other scholars like Haggard et al (2012) had basing on their study revealed that short selling investor tends to speculate. They have examined in relationship amongst hedge fund participation, short-selling levels and stock return surrounding private investment in public equity (PIPE) issuances, for evidence of manipulative short-selling by hedge funds.

Their data were obtained from Sagient Research where they commenced all PIPE deals occurred in the period of 2005 – 2007 with a time period of more than 5,000 PIPE deal with total transaction value of bigger than USD140billion. Their research narrowed down to concentrate on traditional stock hedge fund with a total of 1,051 PIPE transactions to avoid cross-sectional differences in different PIPE deal structure.

The result of their finding revealed that lesser pre-deal short selling happened when hedge funds are included in the PIPE investor group and noted that adjusted returns for firms with hedge funds as investors are positive in the pre-deal period and negative in the post-deal period. Both these results were not in line with the expected given manipulative short selling by hedge funds where adjusted return of both pre-deal and post-deal are unrelated to pre-deal short selling by hedge funds. Their finding concluded that most hedge funds that invest in traditional stock PIPEs do not involve in manipulation of short selling transactions. A study by Haggard, Hao & Zhang (2012) on speculation could relate to our study to examine whether speculation on RSS listing announcement on BM.

To examine the relationship between excess return and short sales activities for this study, the existing study by Chen (2012) on the relationship between excess returns and short sales activities under unexpected informed and uninformed short sales were considered. Chen (2012) had based on legitimate short selling trading strategy in Hong Kong Stock Exchange (HKEx), studied over 229 stocks which were eligible for short sales for a period of 269 trading days for his studies.

The result of this research revealed that stock prices were in decreasing pace for unexpected informed short sale and had a negative effect on excess returns while unexpected uninformed short sales showed increasing pace and has a positive effect on excess returns.

Similar to Malaysia, short-selling in Taiwan has been banned since September 1998 at a price below the close price of the previous trading day due to the credit crunch

with new rule creates a unique daily dynamic of short-sales constraints. Lin (2012) has conducted a research on price changes with the purpose of evaluating short-sales constraint rule. He had studied on daily stock return and other characteristic of 186 stocks with trading day from the period from September 13, 1994 to January 19, 2003 both fall under constrained and unconstrained period.

His findings were in line with Diamond and Verrecchia (1987)'s study that stock prices react to private information. He revealed that stock price changes on information even if short sale was not banned. Lin (2012) concluded that short-sales constraints imposed by the government were not effective tools to control the pressure of stock prices that were dropping during a crisis if rational investors continue to their belief in forming their investment taking into consideration of short-sale constraint.

Asquith, Pathak & Ritter (2004) examined short interest and stock returns more comprehensively and discovered that there is a negative correlation between market return and short interest over the period of their study from 1988 to 2002 from NYSE-Amex and Nasdaq stocks.

Additional studies related to short selling by Endo and Rhee (2006) studied on margin trading which includes short selling that could attract relatively powerful and fast liquidity recoveries after markets corrections or crashes were studied as additional information for this study. According to Endo and Rhee (2006), design and operation of the market infrastructure are different from country to country and to a specific market. They had examined the issue by comparing the "post/pre-crash

ratios" of 22 selected markets that experienced market crashes in the 1990s and the early 2000s, based on their trading values for periods up to twelve months preceding and following the crashes. 10 out of 22 markets had short selling facilities, his studies revealed that when the markets crashed, the other twelve countries/markets without short selling facilities did not crash whereas the /market with short selling facilities crashed. Their study concluded that liquidity recoveries in short selling facility countries were generally reacting faster to market condition.

Their study had revealed that short selling facilities that are not regulated would incur more problems in terms of over speculation activities by investors which are deemed as unethical that will ultimately affect the stock borrowing and lending system, stock market's volatility and stability and makes the market susceptible to price manipulation. Thus, short selling facilities are required to be regulated addressing issues faced.

Short selling activities were commonly designed or structured by local regulators, financial intermediaries, and investors who have intensified risk management skills in addition to vigorous market infrastructure that fit into the country or market condition. The consideration of the regulations is basing on the characteristics and composition factors that affecting the design and operation that are dynamic and the key components of this important market infrastructure must be flexible so that they can change over time.

A roundtable conference was held by the Securities and Exchange Commission (SEC) of the United State of America (USA) on 29th September 2009 discussed on

various issues relating to securities lending which inclusive of short selling, possible requirement to securities lending for short sales and additional disclosure of information for short selling (Campion and Hirschfeld 2010). The Chairman, Schapiro notes that securities lending had become one of the long-standing practice since 1970s. With increasing strategies used in short selling, securities lending had grown further from 1990s and 2000s.

The roundtable had discussed in the overview of securities lending presented by representatives from broker-dealers, corporate issuers, beneficial owner lenders, lending agents, borrowers of securities, self-regulatory organizations, international regulators and the academic community, discussed over the process of securities lending in Security Market and advantages and disadvantages of short selling. The conference had discussed on securities lending and investor protection with conclusion to improve the securities lending for the benefits of the investor by ensuring investment transparency, providing electronic platforms concentrate to post-trade activities rather than at the time of trade currently to canter the majority automated transaction that serves the industry well.

To examine on the effect of regulation implementation on RSS, study conducted by Ulibarri, Florescu, & Eidsath (2009) on impact of implementation of policy implemented by the US Securities and Exchange Commission on the issue of prohibition of naked short selling transaction on selected financial stocks was studied. Ulibarri et al (2009) had concentrated on 25 most popular shorted stocks on the NYSE and NYSE ACRA for which short selling was prohibited on July 15,

2008. The research results suggest that short-selling constraints in some cases affect stock price changes which contributed to stock price stability in the stock market.

Besides Ulibarri et al (2009) who examined the effect of policy implementation by the US Security Exchange Commission, Moffett et al (2012) had examined the impact and result of Regulation SHO implementation by the Security Commission in United State of America (USA). According to Moffett et al (2012), the Security Commission in United State of America (USA) had on January 3, 2005 implemented Regulation SHO for the purpose of reducing unhealthy short selling practice which was also known as naked short selling. Moffett et al (2012) had examined the impact and result of Regulation SHO implementation in achieving the goal of naked short selling transaction.

Moffett, Brooks & Jeon (2012) had examined stocks traded on the NYSE, AMEX and NASDAQ market whom appeared on the SHO between the period from January 3, 2005 to February 20, 2006.

There were a total of 77 companies listed for the 100 days research period, 15 companies were removed leaving with 62 companies in the sample for research. Other data obtained includes daily stock closing prices and trading volume for 150 trading days prior to the date of the issue first appears on Threshold List and 100 days after the appearance on the Threshold List.

The result of their study revealed that stock prices on average were moving downward after it was identified by Regulation SHO as having overly traded naked

short position. They concluded that implementation of Regulation SHO was not effective and does not help much in controlling naked short selling activities and the results had also revealed that a profitable investment strategy could be created by investor on shorting stock for better profit.

2.4 Chapter Summary

In this chapter, we had discussed on definition of short selling, operational method of short selling transaction and progress of short sales in the US market since the 1980s still now and short sales history in Malaysia market. Several studies related to short sales which inclusive of short sales activities that believed to improve the liquidity in the market, advantages and disadvantages of allowing short sales activities, short sales constraints implementation, regulators' action to combat abusive short sales activities by investors which inclusive of stock speculation, stock price fluctuation trend with implementation of regulated short selling in overseas market.

The main objective of this study is to concentrate on Malaysia RSS and to determine the stock price changes prior to and after it is being added into RSS list or being removed from RSS list.

Several studies related to short selling had been conducted in the past discussed on effect of short sales activities in overseas, there is no study in relation to RSS found in Malaysia. This study focuses on RSS on Malaysia stock market and to determine stock price changes prior to and after it is announced to be listed in RSS list or being removed from RSS list.

CHAPTER THREE

METHODOLOGY

3.0 Chapter Overview

This chapter starts with a research framework follow by hypotheses/proposition development, research design, data collection, sampling, data collection procedures, techniques of data analysis, and lastly chapter summary.

3.1 Research Framework

In this section, we developed hypotheses based on past literature by determining the firm's stock price reaction prior, on and after it is being listed in RSS list and removed from RSS list.

According to BM's chief executive officer Yusli Mohamed Yusoff during the announcement of reintroduction of RSS, implementation of short selling is one of the features of developed stock market which would contribute to attract more foreign investors, to increase the stock market liquidity and to enhance the vibrancy of Malaysia Market. (Bernama 2006; Oxford Business Group 2006).

The findings of this study will help us to make decisions on whether to accept or reject our hypothesis.

3.1.1 Hypothesis Proposition and Development

The hypotheses of this study are as below:-

3.1.1.1 Hypothesis 1:

H_0: Stock price is less volatile before it is listed in the RSS list in BM.

This study hypothesized that the stock price could be less volatile prior to listed in the RSS list in BM.

3.1.1.2 Hypothesis 2:

H_0 : Stock price increases after it is listed in the RSS list in BM.

As per announcement by BM on implementation of short selling that could attract more foreign investor to increase the stock market liquidity and enhance the vibrancy of Malaysia market, we hypothesized that demand of stock should be increased that causes stock price increases after it is listed in the RSS list in BM.

3.1.1.3 Hypothesis 3:

H_0 : Stock price is less volatile prior to removal of the stock from an RSS list in BM.

This study hypothesized that price of stock listed in RSS list is less volatile after some period of the listing.

3.1.1.4 Hypothesis 4:

H_0 : Stock price decreases after it is removed from RSS list in BM.

Removal of stock from RSS list in BM might impact the stock demand to a lower level that could ultimately cause decreases in stock price. Thus, we hypothesized that demand of stock would be decreased after it is listed in the RSS list in BM.

3.2 Research Design

This study is designed to find out the RSS stock price changes prior to and after the stocks were selected to be listed in RSS list or removed from RSS list.

3.3 Data Collection

Secondary data were used in this study. Secondary data is defined as information gathered and recorded by someone other than the researcher who is conducting the current project. There are two categories of secondary data; internal and external. Internal data is generated and recorded by an organization and outsiders have no permission to access it. There are many sources of external data, including journals, books and periodicals, the media, government publications, census data and so on. In this study, data collected was in the form of secondary data from DataStream a Thompson Reuters Group of Companies in and Sultanah Bahiyah Library located in Universiti Utara Malaysia (UUM) Sintok.

3.4 Sampling

Regulated short selling was suspended in the year 1997 during the Asian Financial Crisis and had reintroduced again in the year 2007. The initial plan of this study is to examine RSS stock price changes prior to and after it is listed in the RSS list in BM and prior to and after is it removed from the RS list in BM for the period from 2010 to 2012. In view of occurrence of sub-prime crisis in year 2008 that had affected the volatility of most Asian stock market (Singhania & Anchalia 2013), the research period has thereafter changed to 2010 to 2012.

The raw sample comprises 200 RSS stocks prices for the period from 2010 to 2012 that were listed in RSS list. As this study is to examine the price change effect, we had narrowed our data to 71 RSS stocks which comprises of 2,840 prices that were selected to be listed in the RSS list in the research period and 76 RSS stocks which comprises of 3,040 prices that were selected to be removed from RSS list in the research period.

Table 3.1 shows the number of stocks published by BM on new stock listed in the RSS list in BM and Table 3.2 shows number of stocks published by BM on stock that were selected to remove from RSS list in BM.

Table 3.1 : Number of RSS stocks selected to list in the RSS list in BM

Date of listing	**No of stock**
03/02/2010	10
29/07/2010	19
02/02/2011	10
01/08/2011	13
09/02/2012	9
01/08/2012	10
Total stock	**71**

Source : Bursa Malaysia

Table 3.2 : Number of RSS stock selected to remove from RSS list in BM

Date of listing	**No of stock**
03/02/2010	11
29/07/2010	19
02/02/2011	11
01/08/2011	13
09/02/2012	9
01/08/2012	13
Total stock	**76**

Source : Bursa Malaysia

3.5 Data Collection Procedures

Secondary data were used in this study. All data were obtained from DataStream a Thompson Reuters Group of Companies in Sultanah Bahiyah Library – UUM Sintok.

This study concentrates on RSS stock price changes prior to and after it is being listed in the RSS list in BM or removed from RSS list in BM, the data collection was then narrowed down by searching for a list of stocks that were selected by BM to be listed or to be delisted. Announcement from BM on stocks to be listed in RSS list and stocks to be removed from RSS list were taken from circulars from BM. There were 2 announcements a year of changes in RSS list, the half yearly announcement was in the beginning of the year between January to February and in the middle of the year between July to August.

The research period is from year 2010 to the year 2012. Data pulled from the data room in the Sultanah Bahiyah Library in UUM Sintok were list of stocks announced to be listed in RSS list or to be delisted from RSS list basing on circular distribute by Bursa half yearly basis.

Henderson and Glenn (1990) stated that event study is well suited to assessing the impact of market-wide events such as regulation or legislation on the market as a whole. The date selection in the process of an event study should be reflecting the public reasonably expected price according to the news. Most of the event studies on event date were usually 1 or 2 days before or on the announcement date (t = - 1, t = - 2, etc).

To examine the result from a wider angle, a total of 81 days stock prices data were collected. The 81 days (- 40 to + 40) data comprises of 40 days stock prices before stocks were listed in RSS list or removed from RSS list, 1 day on the event day and 40 days after the stocks were being listed in RSS list or delisted from RSS list.

3.6 Techniques of Data Analysis

Event study is widely used by the scholar to examine the impact of a specific event or happening toward a firm. Some examples include official earning announcements, mergers and acquisitions, issue of new debts or equity. (Mackinlay, 1997)

This study does not follow the normal way of conducting an event study to examine the different on specific events, this study concentrates on reaction before and after the happening of the event which is listing and delisting of RSS stock in the RSS list in BM. In view of different ways of conducting this event study, the normal return is estimated based on the return of the KLCI index which, KLCI index represents the overall market performance in Malaysia market.

To test on hypotheses in this study, we need to examine the RSS stock prices before, on and after event dates. We used the measures of abnormal returns (ARs), average abnormal return (AAR) and cumulative abnormal returns (CARs) around events dates according to study of Brown and Warner (1985) on examination of the daily RSS stock returns and how the particular characteristics of these data affect the event study methodologies.

Prior to measure the abnormal returns (ARs), the raw daily return of the RSS stocks during the event window of 81 days (- 40 to + 40) for each security, with day 0

defined as the event day need to be determined. Expected return is required for AR calculation, KLCI index which is the overall stock return in BM has taken in as the benchmark. Raw daily returns are calculated as follows:-

$$R_{i,t} = (P_{i,t} - P_{i,t-1} / P_{i,t-1})$$

(1)

Where :

$R_{i,t}$ = raw return of RSS stock on day *t*

$P_{i,t}$ = closing price of RSS stock on day *t*

$P_{i,t-1}$ = closing price of RSS stock on day *t - 1*

$$R_{m,t} = (P_{m,t} - P_{m,t-1} / P_{m,t-1})$$

(2)

Where :

$R_{m,t}$ = raw return of KLCI on day *t*

$P_{m,t}$ = closing price of KLCI on day *t*

$P_{m,t-1}$ = closing price of KLCI on day *t - 1*

Once raw daily returns are obtained, proceed to calculate daily abnormal returns (AR) for events in the research window by subtracting the expected return of the raw return of RSS stock. Hence,

(3)

$$AR_{i,t} = r_{i,t} - r_{m,t}$$

Where :

$AR_{i,t}$ = Abnormal return of RSS stock on day *t*

$r_{i,t}$ = Raw return for RSS stock on day *t*

$r_{m,t}$ = Raw return on KLCI on day *t*

Thereafter, calculate the average abnormal return (AAR) for the day *t* across all RSS is calculated as the equally weighted arithmetic average of the individual abnormal returns.

(4)

$$AAR_t = \left(\frac{1}{N}\right)\sum_{t=1}^{n} AR_{it}$$

Where :

AAR_t = Average daily abnormal return

N = Number of RSS stock in the sample

Next, the cumulative abnormal return (CAR) on the specified event period is calculated as the sum of the daily average abnormal returns until *t*, where Barber and Lyon (1997) is using this model in their study. Thus,

(5)

$$CAR_T = \sum_{t=1}^{t} AAR_t$$

Where :

CAR_T = Cumulative abnormal return for the specified event period until day *t*

T = some number of event days prior to day *t*

Lastly, a t-statistic is used to test for the significance of CAR. *t-statistic* is to test whether there is a significant change in stock price due to the listing or delisting of RSS stock on RSS list.

3.7 Chapter Summary

This chapter discussed on the method we applied in this research. Hypotheses were developed based on previous literature with researches similar to this study to find out the effect of RSS stock price changes prior to and after it is being added to RSS list or removed from RSS list. Information on where and how data were collected, how sample size was obtained and data collection procedures were informed in this chapter. Lastly, technique on data analysis and formulas were used to meet the objective of this study.

CHAPTER FOUR

RESULTS AND ANALYSIS

4.0 Chapter Overview

This chapter comprises several sections that review the findings of the study which starts with a discussion on the pre listing and post listing of RSS stock listed in RSS list and result using AAR and CAR. Thereafter, focuses on the result obtained from pre and post removal of RSS stock from RSS list and discussion of result using AAR and CAR follow by the overall conclusion of the result. The last section summarize the chapter.

4.1 Prior to and After RSS Stock Listed on RSS List in BM and Result Discussion using AAR and CAR.

4.1.1 Effect of Stock Prices Prior to Listing in RSS List in BM

RSS stock performance prior to listing in the RSS list basing on table 4.1 indicates fluctuated average abnormal returns (AARs) for different event window prior to the listing of the RSS stocks in RSS list. AAR for event window -40 to 0 is -0.00240, -20 to 0 is 0.00052, -10 to 0 is -0.00375, -5 to 0 is -0.00186, -3 to 0 is -0.00349, -2 to 0 is 0.00120 & -1 to 0 is 0.00057. The highest increases in the AAR fall on -2 to event date or 2 days before event day at 0.00120 or 0.12% and AAR with greatest decreases is on the 10th day prior to event date at -0.00375 or a drop of 0.375%. Cumulative abnormal returns (CARs) for different event window prior to RSS listing are mostly positive with lowest CAR of 0.00222 for the event window -1 to event

date to highest CAR of 0.05509 with *t*-value of 3.16794 which fall under the event window of -40 to event date which revealed that it is significantly different from zero at the 1% level. We can see that the average cumulated abnormal return in the event window of -20 to event date amount to 0.03286 with a *t*-value of 2.17768, indicating a statistically significant difference from zero at the 5% level. Event window of -2 to event date recorded a CAR of 3.65363 with *t*-value of 3.65363 indicates significant different from zero at the 10% level.

The results reveal that RSS stock price increases prior to list into RSS list in BM. It does not support our hypothesis 1 where it is predicted that stock price is less volatile before it is listed in the RSS list in BM.

Figure 4.1 shows that the average abnormal return (AAR) fluctuation in a return increasing trend mostly at positive value during the event window prior to RSS stock listing in the BM. It is noted that CAR of the stock starts to increase from -35 or 35 days prior to event day as shown in Figure 4.2 within the research period. Noted that stock prices had start increase earlier than Bursa Malaysia's announcement of listing and delisting circular which announce approximately 5 days before it's officially listing day or known as event day in this study. It is possible that either information about the RSS listing announcement had leaked to investors or there are possibilities of insider trading by investors who were being informed of the announcement and therefore had invested in the stock as soon as they were informed for profit generation.

Table 4.1 : Cumulative Abnormal Returns (CARs) prior to event day

Event window (Day)	-40 - 0	-20 - 0	-10 - 0	-5 - 0	-3 - 0	-2 - 0	-1 - 0
AAR	-0.00240	0.00052	-0.00375	-0.00186	-0.00349	0.00120	0.00057
CAR	0.05509	0.03286	0.00899	0.00531	-0.00008	0.00341	0.00222
STDEV	0.00272	0.00329	0.00353	0.00369	0.00236	0.00054	0.00076
Average	0.00134	0.00156	0.00082	0.00088	-0.00002	0.00114	0.00111
t-Test	**3.16794*** p=0.005	**2.17768*** p=0.025	0.76863	0.58767	-0.01699	**3.65363*** p=0.05	2.06500

4.1.2 Effect of Stock Prices After Listed on RSS List in BM

RSS stock performance after listed in the RSS list basing on table 4.2 indicates mostly negative average abnormal returns (AARs) for different event window after it is being listed in RSS list. AAR for event window 0 to +1 is -0.00096, 0 to +2 is 0.00551, 0 to +3 is -0.00255, 0 to +5 is -0.00909, 0 to +10 is -0.00128, 0 to +20 is 0.00004 and 0 to +40 is -0.00647. The highest decreases in AAR fall on event date to +5 days after event day at -0.00909 or 0.909% and AAR with greatest increases is on the 2nd day after the event date at -0.00551 or an increase of 0.551%. Cumulative abnormal returns (CARs) after the RSS listing improve from event window of 0 to +1 day to 0 to +3 day. It doesn't last long and start to decline with negative CAR with highest negative CAR of -0.05704 recorded for the event window event date to +40 day with *a t - value* of 2.06500 which revealed that it is significantly different from zero at the 5% level. We can see that the average cumulated abnormal return in the event window of event date to +20 day amount to -0.04278 with a *t*-value of

3.65363, indicating a statistically significant difference from zero at the 1% level which suggest a market correction to the price hike.

The results reveal that RSS stock price increased in a short period up to 3 day or event date to +3 day event window which support our hypothesis 2 with the prediction that stock price increases after it is listed in the RSS list in BM. Research result does not support our hypothesis 2 for a longer research period as stock price shows a declining trend from 5th day onward up to event date to +40 day of event window.

Basing on Figure 4.1, it is noted that AAR fluctuation after the event day is bigger than prior to event day with return increases up to 0 to +3 day of event window following by AAR in decreasing trend. Figure 4.2 shows that CAR of stock increases up to -40 to +3 day of the event window thereafter starts declining from -40 to +4 or 4 days after the event day of our research period. Stock price changes after stock listing in the RSS list could due to following possibilities:-

a) Other uninformed investors invest in stock listed in the RSS list in BM on event day that pushes AAR & CAR to go up to -40 to +3 or day 3 of the event window.
b) Both informed and uninformed investors start selling their stock that causes a drop of stock prices and ultimately affected AAR & CAR in the declining trend from -40 to +4 day of the event window with sharp AAR negative of -0.00909 on 0 to +5 and negative CAR of -0.00578 on -40 to +5 day of the event window.

Table 4.2 : Cumulative Abnormal Returns (CARs) after the event day

Event window (Day)	0 - +1	0 - +2	0 - +3	0 - +5	0 - +10	0 - +20	0 - +40
AAR	-0.00096	0.00551	-0.00255	-0.00909	-0.00128	0.00004	-0.00647
CAR	0.00068	0.00619	0.00364	-0.00578	-0.00549	-0.04278	-0.05704
STDEV	0.00185	0.00326	0.00352	0.00485	0.00364	0.00435	0.00379
Average	0.00134	0.00156	0.00082	0.00088	-0.00002	0.00114	0.00111
t-Test	3.16794	2.17768	0.76863	0.58767	-0.01699	**3.65363***	**2.06500***
						P=0.005	P = 0.025

Figure 4.1 : Firms' AAR on inclusion to RSS list in BM within the 81 days research period

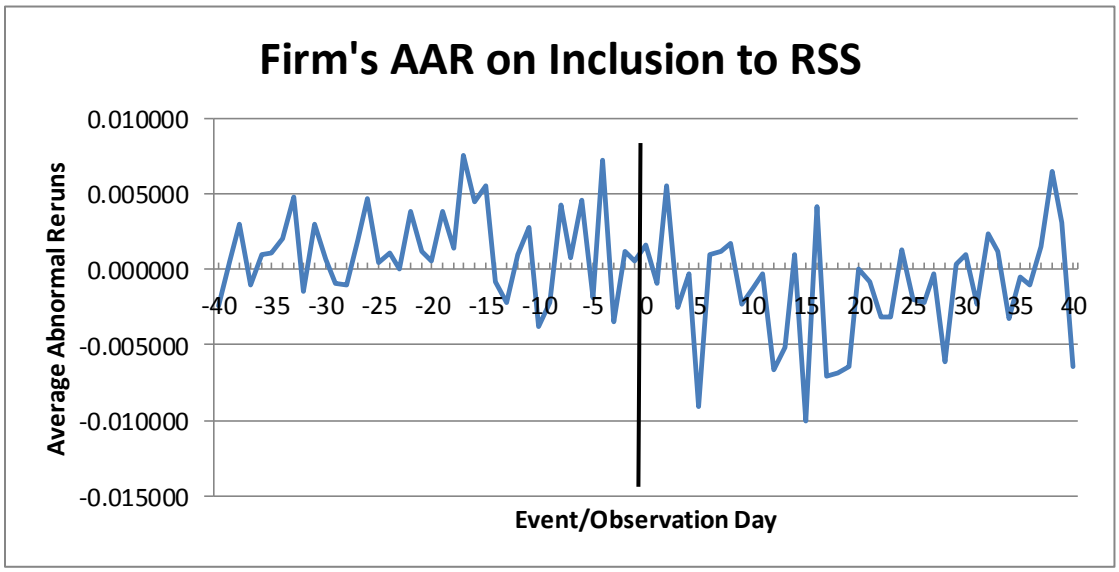
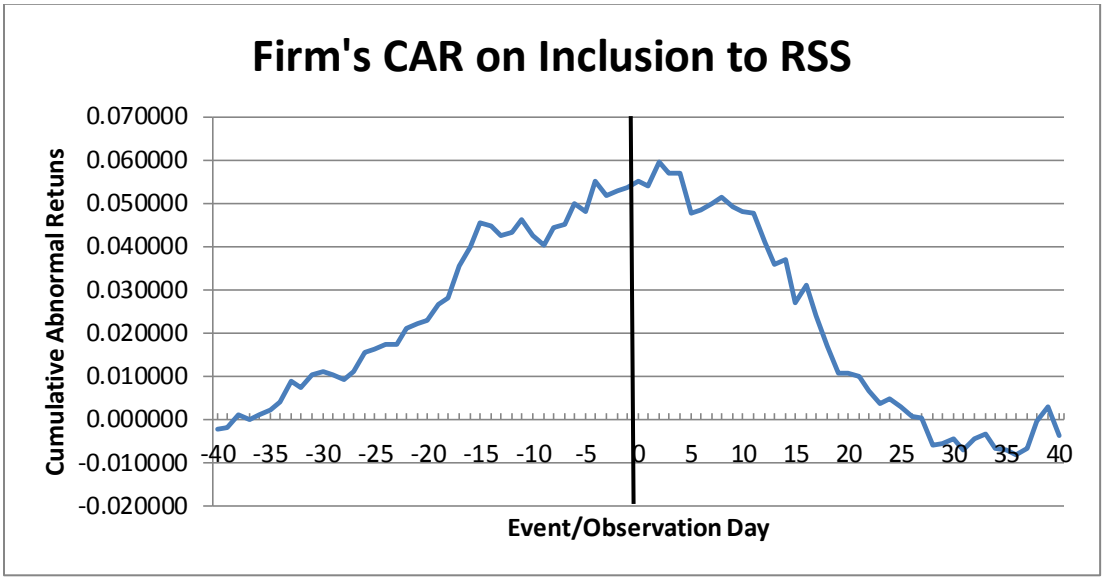


Figure 4.2 : Firms' CAR on inclusion to RSS list in BM within the 81 days research period



4.2 Prior to and After RSS Stock Removal From RSS List in BM and Result Discussion Using AAR and CAR.

4.2.1 Effect of Stock Prices Prior to Removal from RSS List in BM

RSS stock performance prior to removal from RSS list basing on table 4.3 indicates fluctuated average abnormal returns (AARs) for different event window prior to the listing of the RSS stocks in RSS list. AAR for event window -40 to 0 is -0.00452, -20 to 0 is 0.00267, -10 to 0 is 0.00047, -5 to 0 is -0.00126, -3 to 0 is 0.00438, -2 to 0 is 0.0025 and -1 to 0 is -0.00012. The highest increases in the AAR fall on -3 to event date or 3 days before event day at 0.00438 or 0.438% and AAR with greatest decreases is on the 40th day prior to event date at -0.00452 or a drop of 0.452%.

Cumulative abnormal returns (CARs) for event window -40 to event date stood at 0.01909, -20 to 0 at 0.02545, -10 to 0 at 0.02345, -5 to 0 at 0.00970, -3 to 0 at 0.00645 and -2 to 0 at 0.00207 with negative CAR for event window of -1 to event date at -0.00018. It is observed that CAR starts to reduce from the event window of -20 to 0 ended at negative CAR of -0.00018, 1 day prior to event day. CAR for event window -20 to 0 of 0.02545 comes with *t-value* of 2.56660 indicating a statistically significant difference from zero at the 2 % level. It is noted that *t*-value for event window -10 to event date of 3.37006 with CAR of 0.02345 indicates that the result is significantly different from zero at the 1 % level.

The results reveal that RSS stock prices fluctuate within the research period is minimal in the range of negative growth of 0.012% 1 day before the event day with biggest negative growth of 0.0542% in 40 day before the event day and increases prior to removal of stocks from an RSS list in BM. It supports our hypothesis 3 where the stock price is predicted to be less volatile prior to removal of the stock from RSS list in BM.

Figure 4.3 shows a consistent abnormal return (AAR) fluctuation trend with return prior to removal of RSS stock from RSS list in BM. In Figure 4.4, it is noted that CAR of RSS stock were at negative growth from the beginning of our research period and starts to increase from -10 or 10^{th} days prior to event day. Stock prices increase earlier than Bursa Malaysia's announcement of RSS listing and delisting circular which announce approximately 5 days before it's officially listing day and removal day or known as event day in this study. It is possible that investors could

have been informed of the RSS listing and delisting announcement and had invested in the stock to be removed at event window -10 to event date speculating price changes from the announcement with the possibility of making profit from their investment.

Table 4.3 : Cumulative Abnormal Returns (CARs) prior to event day

Event Window (day)	-40 - 0	-20 - 0	-10 - 0	-5 - 0	-3 - 0	-2 - 0	-1 – 0
AAR	-0.00452	0.00267	0.00047	-0.00126	0.00438	0.00225	-0.00012
CAR	0.01909	0.02545	0.02346	0.00970	0.00645	0.00207	-0.00018
STDEV	0.00238	0.00216	0.00210	0.00247	0.00215	0.00135	0.00005
Average	0.00047	0.00121	0.00213	0.00162	0.00161	0.00069	-0.00009
t-Test	1.25102	**2.56660***	**3.37006***	1.60150	1.49992	0.88366	-2.74232
		p=0.01	p=0.005				

4.2.2 Effect of Stock Prices After Removal from RSS List in BM

RSS stock performance after removal from RSS list basing on table 4.4 indicates fluctuate average abnormal returns (AARs) for different event window after the RSS stocks is delisted from RSS list in BM. AAR for event window 0 to +1 is -0.00076, 0 to +2 is -0.00121, 0 to +3 is -0.00352, 0 to +5 is -0.00080, 0 to +10 is 0.00136, 0 to +20 is -0.00178 and 0 to +40 is -0.00268. The highest decrease in AAR fall on event date to +3 or 3 days after event day at 0.00352 or 0.352% and AAR with only positive is on the 10th day after the event date at 0.00136 or an increase of 0.136%.

Cumulative abnormal returns (CARs) for different event window after removal of RSS sock from RSS list is consistently in negative growth during the event window of event date to +40 days. CAR at event window of 0 to +1 stood at -0.00082, 0 to +2 at -0.00203, 0 to +3 at 0.00555, 0 to +5 at -0.00592, 0 to +10 at -0.00203, 0 to +20 at -0.02756 and 0 to +40 at -0.03100. CAR for event window event date to +20 day of -0.027856 comes with *t-value* of -2.91577 indicates a statistically significant difference from zero at the 1 % level. It is noted that *t*-value for event window event date to +40 day of -1.96178 with CAR of -0.03100 indicates that the result is significantly different from zero at the 10 % level.

The results reveal that RSS stock price decreases after it is being removed from RSS list in BM. It supports our hypothesis 4 where the stock price is predicted to be decreased after it is removed from RSS list in BM. The result matches study conducted by Bai et al (2003) & Chen (2012) that short sale constraint affects asset prices moving downward.

Figure 4.3 shows that the average abnormal return (AAR) fluctuation with return in negative and decreasing trend during the event window after removal of RSS stock from RSS list in BM. In Figure 4.4, it is also noted that CAR of RSS stock reduces immediately from event day or official removal day. CAR increased in 0 to +5 consistently until 0 to +10 and followed by sharp decreases until the end of our research period.

It is noted that stock prices start decreasing in event window of -3 to 0 prior to the official announcement of RSS stock removal from RSS list in BM which is approximately 5 days prior to official listing and delisting day.

Table 4.4 : Cumulative Abnormal Returns (CARs) after the event day

Event Window (day)	0 - +1	0 - +2	0 - +3	0 - +5	0 - +10	0 - +20	0 - +40
AAR	-0.00076	-0.00121	-0.00352	-0.00080	0.00136	-0.00178	-0.00268
CAR	-0.00082	-0.00203	-0.00555	-0.00592	-0.00203	-0.02756	-0.03100
STDEV	0.00050	0.00058	0.00150	0.00137	0.00169	0.00206	0.00247
Average	-0.00041	-0.00068	-0.00139	-0.00099	-0.00018	-0.00131	-0.00076
t-Test	-1.16278	-2.02145	-1.85017	-1.76204	-0.36306	**-2.91577***	**-1.96178***
						p=0.005	p=0.05

Figure 4.3 : Firms' AAR on exclusion from RSS list in BM within the 81 days research period

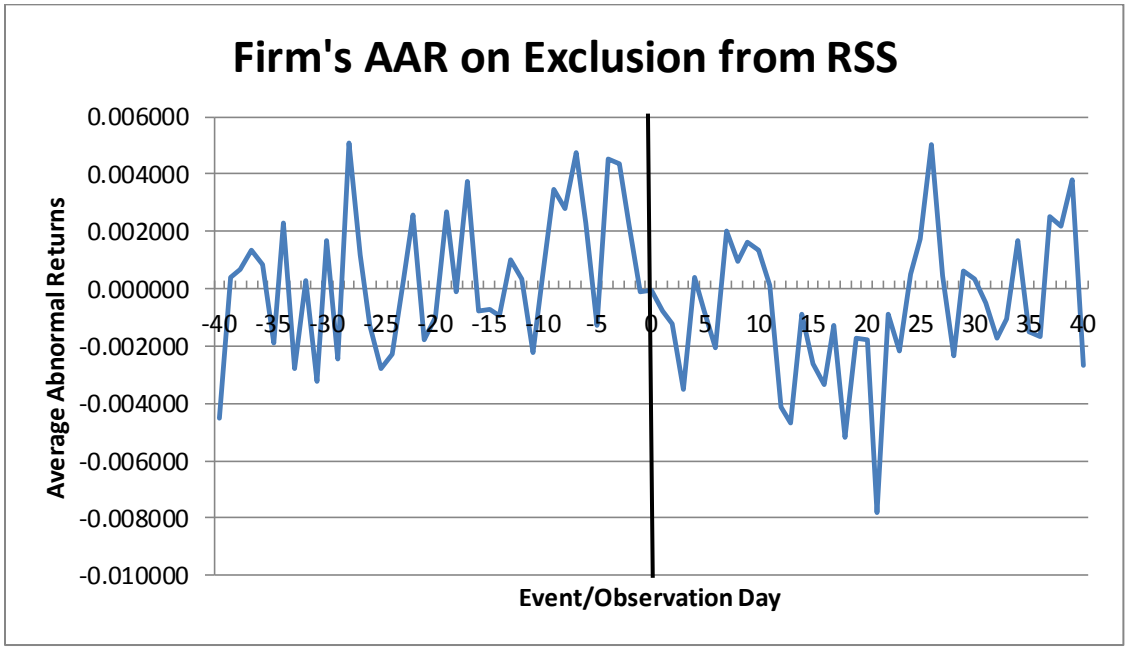
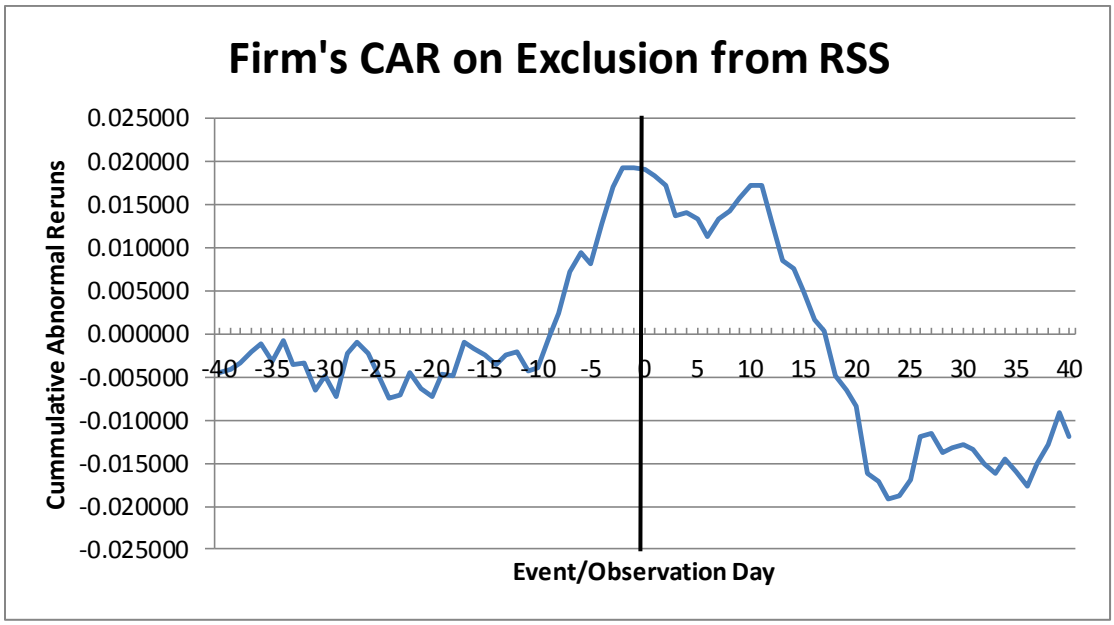


Figure 4.4 : Firms' CAR on exclusion from RSS list in BM within the 81 days research period



4.3 Conclusion

The results of this study reveal that RSS stock price increases prior to listing into RSS list in BM which does not support hypothesis 1 with the prediction that stock price is less volatile before it is listed in the RSS list in BM.

The RSS stock price increased immediately when it is listed in the RSS list up to day 3 of event window but thereafter, stock price move to the declining trend from day 5 onward up to the end of the research period. This result supports Hypothesis 2 in a short period but does not support hypothesis 2 for a longer research period.

Prior to delist of RSS stock in the RSS list in BM, stock prices fluctuate within the research period is minimal which is less volatile. It supports hypothesis 3 where the

stock price is predicted to be less volatile prior to removal of the stock from RSS list in BM.

RSS stock price decreases after it is being removed from RSS list in BM, this support hypothesis 4 where the stock price is predicted to be decreased after it is removed from RSS list in BM.

4.4 Chapter Summary

In this chapter, we have based on a 81 day research period of our study and had tested our hypotheses. The findings in this research do not support hypothesis 1 and 2 predicted that stock prices prior to listing into RSS list should be less volatile and stock price increases after it is listed in the RSS list in BM respectively. Our prediction is basing on the announcement by Bursa Malaysia on re-introduction of short selling in the year 2007 quoted implementation of short selling would contribute to attract more foreign investors, to increase the stock market liquidity and to enhance the vibrancy of Malaysia (Bernama 2006; Oxford Business Group 2006).

The result of the test does not support both the hypotheses 1 and 2 with significant return increases way before the announcement of listing of the RSS stock in RSS list and stock price does not increase after it is listed in BM. In our study, it is observed that cumulative average return start increases 40 days prior to the official listing of the RSS stock in the RSS list in BM and it is observed that stock prices do not continue the positive return pace with CAR start reducing from the 3rd day after stock listed in RSS list.

To find out for reason of inconsistency of our prediction, we have looked for more existing studies conducted by scholars in relation to short sales prices changes prior to listing announcement. Few previous related researches obtained e.g. study by Christophe et al (2004) who had examined on short-sales transactions prior to announcements of 913 Nasdaq-listed firms with test result with evidence of informed trading in the pre-announcement short-selling and abnormal short selling transaction are found significantly linked to post announcement stock return.

The result of RSS stock price changes when it is listed in the RSS list in BM or removed from RSS list from the BM match with existing scholars' studies conducted by Diamond and Verrecchia (1986), Conrad (1986) and Bai et al (2006). Diamond and Verrecchia (1986) studied on speed of security price adjustment towards private information for short sales constraints. Finding of the study explained that short sales constraints can influence the rate at which private information is revealed to the public through observable trading.

The result of this study matches intuition of Conrad (1986) who explained on unexpected informed short sales that affect price changes. His finding shown an unexpected informed short sale is generally negative news before short interest announcement days in New York Stock Exchange market. His finding revealed that the information was leaked to the market and the stock price adjusted to the news on the day before the short interest announcement

RSS stock price changes on listing announcement matched with study by Bai et al (2006) on how short-sale constraints affect asset price and market efficiency. Their study

revealed that private information increases the uncertainty about the assets demand by less informed investors. Their study had further revealed that private information on short-sale constraints causes asset prices to decrease and price volatility to increase.

Stock prices increase prior to listing of stock in RSS list and stock prices drop from the 3rd day after it is listed in the RSS. Supported by existing scholars' existing studies over private information and information leak to the market that affect stock prices, it is possible that the result of our research could due to following possibilities:-

a) Stock price increases earlier than official announcement of RSS stock listing in the BM, it is possible that investors had received some insider news of the listing and had started investing upon being informed of the news.
b) Other uninformed investors invest in new stock listed in the RSS list in BM on the official listing day that pushes AAR & CAR to continue moving upward until day 3 of the event window.
c) Both informed and uninformed investors start selling their stock that causes a drop of stock prices and ultimately affected AAR & CAR graph that move in the declining trend in the event window.

The research results supported hypothesis 3 where stock prices were less volatile prior to removal of stock from RSS list. Hypothesis 4 was supported by the research result where stock prices drop after it is removed from RSS list.

Accuracy of the research might be affected by the economy situation where bear market and bull market will affect the volume and indexes as investors' investment strategies

might base on several angles, from future market growth conditions, economy uncertainty, country or market regulations and etc.

This study has excluded analysis on financial performance and management performance in qualitative or in quantitative of the companies listed in RSS in BM. The result is mainly based on historical transactions transacted in BM on stock that was listed or being removed from the approved list by BM. An informed investor should consider all aspects of their investment for risk management and avoidance of speculations.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Chapter Overview

This chapter starts with overview introduction of this study, a summary of findings, recommendations of the study followed by suggestions for future research and lastly conclusion.

5.1 Introduction of this study

The purpose of this study is to examine the effect of the stock price changes in stock to be listed in RSS list or to be removed from RSS list. Secondary data was collected based on RSS listing circular with share prices of the affected stock during the research period were taken. A total of 71 stocks for stock to be listed in RSS list and a total of 76 stocks to be removed from RSS list were retrieved for our research in the research period from 2010 to 2012.

Average return (AR), Average abnormal return (AAR) and cumulated abnormal return (CAR) were taken to test on hypothesis in this study with *t*-statistic used to test on the significance of CAR whether there is a significant change in stock prices due to the listing or delisting of the RSS stock in RSS list.

5.2 Summary of findings

This chapter discussed the findings based on the research questions and research objectives. The results of the research does not support all the hypotheses in this study on effect of stock price changes on stock to be listed in the RSS list in BM or stock to be removed from RSS list from BM.

The research revealed a mixed result with hypothesis 1 and 2 do not supported by the research result and hypothesis 3 and 4 were supported by research results. Hypothesis 1 predicted that stock prices could be less volatile prior to stock listing in the RSS list in BM and hypothesis 2 predicted that stock prices could be increased after it is listed in the RSS list in BM. Both hypotheses were not supported from the research result with the observation that stock prices were increasing before listing announcement from event window -40 to event date with most AAR in a positive position and CAR were in an increasing pace from -35 to event date prior to event day as shown in Figure 4.1 and Figure 4.2 within the research period. Noted stock prices had started increasing earlier than Bursa Malaysia's announcement of listing and delisting circular which announce approximately 5 days before its official listing day or known as event day in this study. Stock prices of stocks listed in the RSS list start declining from day 3 after the official listing with small rebound happen in between until the end of the research period or known as event date to +40 day. It is suspected that investors could have been informed of the RSS listing announcement and had invested in the stock to be listed as soon as they were informed of the information and had for profit generation.

The results of testing of stock price changes prior to removal of RSS stock from RSS list and after RSS stock removal from RSS list supported hypothesis 3 and 4. It is observed that stock prices were less volatile with small stock price fluctuation from 0.012% to 0.0542% during the research period from 40 days up to 10^{th} days prior to formal removal of RSS stock from RSS list. The research finding shows that stock price increases from day 10^{th} prior to RSS stock removal from RSS list with increases continue after the stock were listed in RSS list. Stock prices start declining from day 3 after it is listed, rebound on day 5 and follow by a sharp drop until the end of the research period.

5.3 Recommendations

The research results have revealed that stock prices of stock to be listed in the RSS list increases prior to the official announcement and official listing day and stock prices does not continue moving upward as predicted instead, moving downward from day 3 after it is officially listed in the RSS list until the end of the research period. This has aroused a question about causes of unusual stock price increases and stock prices decreases for profit taking by investors.

Based on these findings, it would be useful to consider future research as follows:

1. What causes stock prices of RSS stock to be listed in RSS list increases earlier than official announcement of stock to be listed in the RSS list in BM?
2. Is there any speculative transaction involve for stock to be listed in RSS list or stock to be removed from RSS list?

3. What are the pro and cons of re-implementation of regulated short selling (RSS) activities in Malaysia market?

5.4 Conclusion

Basing on the result, it is noted that stock prices tend to move in an upward trend before announcement of stock listing to RSS list and stock prices would thereafter move downward few days after it is listed in RSS list and it is observed that stock prices of stock to be delisted from the RSS increase after the RSS stock delisting announcement. Stock prices drop immediately on the delisting event date and stock prices continue moving downward until the end of the research period.

To increase wealth and or to reduce potential losses, an investor could observe RSS listing and delisting announcement by Bursa to grab the opportunity to invest the stock before RSS stock is listed in RSS list or to sell off the stock in hand after the announcement of delisting of the RSS stock from RSS list.

Government policymaker or regulators could observe RSS investment activities in Malaysia market and implement negative regulation that could stop unhealthy speculation over the respective stock and positive regulations that could increase the investment activities in RSS.

The researcher could take this study as additional knowledge for studies. It could be taken for their research and for academic purposes that could provide them the information in relation to Malaysia regulated short selling.

This study is useful for BM as they could basing on this study, looking for opportunities to encourage investor to invest more actively in Bursa, either in normal stock investment, RSS and other investments.

Accuracy of the research might be affected by the economy situation where bear market and bull market will affect the volume and indexes as investors' investment strategies are based on many angles, from future market growth conditions, economy uncertainty, country or market regulations and etc.

This study has excluded analysis on financial performance and management performance in qualitative or in quantitative of the companies listed in RSS in BM. The result is mainly based on historical transactions transacted in BM on stock that was listed or being removed from the approved list by BM. A wise investor should consider all aspects of their investment for risk management and avoidance of speculations.

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